

## REMARKS

Claims 1-30 were pending in the application. Claims 1-30 have been rejected under 35 U.S.C. §103(a) as being deemed unpatentable in view of Bergsten (U.S. Patent No. 6,360,306), DuLac (U.S. Patent No. 5,550,986), Kern et al. (U.S. Patent No. 5,870,537), Wilson (U.S. Patent No. 6,718,347), Mogul (RFC0917: Internet subnets, 1984, ACM, pages 1-17) and Miller (U.S. Patent No. 5,506,984). Of the Claims, Claims 1, 11 and 21 are independent. Claims 31 and 32 are newly added. Support for Claims 31 and 32 is in the Applicants' specification as originally filed. (*See*, for example, Page 25, lines 5-10.) Claims have been amended to clarify the Applicant's invention. The application as amended and argued herein, is believed to overcome the rejections.

### Regarding Rejections under 35 U.S.C. § 103(a)

Claims 1-2, 4-12, 14-17, 19-22, 24-27, and 29-30 are rejected under 35 U.S.C. §103(a) as being unpatentable over Bergsten (U.S. Patent No. 6,360, 306) in view of DuLac (U.S. Patent No. 5, 550,986 and Kern et al. (U.S. Patent No. 5,870,537), and further in view of Wilson (U.S. Patent No. 6,718,347).

Claims 3, 13, and 23 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Bergsten in view of Dulac, Kern et al. and Wilson and further in view of Mogul (RFC0917: Internet subnets, 1984, ACM, pages 1-17).

Claims 18 and 28 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Bergsten in view of DuLac, Kern et al. and Wilson, and further in view of Miller (U.S. Patent No. 5,506,984).

Turning to the cited art, Bergsten discusses a method for storing multiple backup copies of data in geographically separate locations. The system discussed by Bergsten includes a plurality of storage controllers coupled via a communications link. Each of the plurality of storage controllers is directly coupled to a respective host and a respective storage array. The storage controllers co-operate to allow any of the hosts to access data stored in any of the locally coupled storage arrays. (*See* Bergsten Fig. 1, storage controllers (3-1, ..., 3-M), communications link (9), host (2-1, ..., 2-M), storage array (4-1,...,4-M); col. 3, lines 36-63.)

Cited reference DuLac discusses a RAID array that includes an array of storage nodes with each storage node including a data storage device and a processor.

Cited reference Kern discusses a disaster recovery system that provides remote data shadowing by storing a mirror image (logical or physical) of the primary device on a secondary device. Upon detecting a failure in the primary data storage device, all access is swapped (switched) to the secondary data storage device. (See Kern col. 9, lines 14-31 and col. 12, lines 1 -28 and Figs 1 and 5.)

Cited reference Wilson discusses a system for maintaining coherence among copies of a database shared by multiple computers with data stored in storage subsystems. (See Wilson Fig. 3 and Abstract.)

Cited reference Mogul discusses partitioning a host address space by assigning subnet numbers to LANs.

Cited reference Miller is directed to a method for data retrieval in a distributed system. A query entered at a user interface is directed to different databases using linked references by an organization engine until the requested data is retrieved from one of the databases. (See Miller col. 14, lines 10-51.)

Although as indicated in the present Office Action ,one cannot show non-obviousness by attacking references individually where the rejections are based on combinations of references, (see MPEP 2145 IV), however, to establish a prima facie case for obviousness under 35 U.S.C. 103(a), (1) there must be some suggestion or motivation to combine reference teachings; (2) there must be a reasonable expectation of success; (3) the references when combined must teach or suggest all the claim limitations. (See MPEP 2143.) For the reasons discussed below, it is respectfully submitted that the Office has not established a prima facie case under 35 U.S.C. 103(a) for claims 1-30 and that therefore, claims 1-30 are allowable.

The references when combined do not teach or suggest all the claim limitations.

Bergsten does not teach or suggest at least “providing a plurality of distributed object storage managers “DOSMs” for receiving requests for files” as claimed by the Applicant in claim 1. In contrast, in the system discussed by Bergsten, in addition to managing its respective storage array, each storage controller also manages requests from hosts for files that are stored in the storage arrays through the use of virtual-to-real device

mapping. Thus, there is no teaching or suggestion of “intelligent storage nodes accessible to said DOSMs over a wide area, public access network coupling the DOSMs to the intelligent storage nodes, said intelligent storage nodes accessible to said DOSMs via public access network addresses associated with the intelligent storage nodes, each intelligent storage node including a processor core and a plurality of storage devices” as claimed by the Applicant in Claim 1. In contrast, Bergsten merely discusses a plurality of storage controllers coupled via a communications link that communicate over the communications link to allow any of the hosts to access data stored in any of the locally coupled storage arrays. The storage array is merely an array of storage devices that communicate with the storage controller using the Small Computer System Interface (SCSI) protocol. (*See*, Bergeston, col. 6, line 59 to col. 7, line 8.)

Futhermore, Bergeston does not teach or suggest “redirecting said file request to said second intelligent storage node over said network” as claimed by the Applicant in Claim 1. In contrast, in Bergeston’s system, the storage controllers are coupled via a communications path that is separate from the communications path coupling storage devices to the storage controller. (*See* Fig. 1, communications paths 9, 8.)

The additional references Kern, DuLac, Wilson, Mogul and Miller fail to cure the deficiencies of Bergsten noted above. The additional references fail to disclose or suggest at least ““each intelligent storage node including a processor core and a plurality of storage devices”. The “intelligent storage node” discussed by DuLac does not teach or suggest the applicant’s claimed “intelligent storage node” that includes “a processor core and a plurality of storage devices” as claimed by the Applicant in claim 1. In contrast, the “intelligent storage node” discussed by DuLac merely refers to a data storage device that includes a processor for storage media control such as head positioning, data encoding/decoding and defect handling. DuLac refers to a Small Computer System Interface (SCSI) disk drive as being a typical example of an intelligent storage node. (*See* DuLac col. 3, lines 54-60, Fig. 2.) As shown in Fig. 2 of DuLac, the node includes one processor (P) for controlling one storage element (D). In contrast, in an embodiment of the Applicant’s claimed invention, an intelligent storage node includes a core processor coupled to a plurality of storage devices, and each of the storage devices may

be a SCSI disk drive. (*See*, for example, Page 25, lines 5-10; Fig. 7 in the Applicant's application as originally filed.)

Furthermore, the additional references Kern, DuLac, Wilson, Mogul and Miller fail to disclose or suggest at least "intelligent storage nodes accessible to said DOSMs over a wide area, public access network coupling the DOSMs to the intelligent storage nodes, said intelligent storage nodes accessible to said DOSMs via public access network addresses associated with the intelligent storage nodes, each intelligent storage node including a processor core and a plurality of storage devices" and so fail to disclose the invention as recited in claim 1. Thus, the references when combined do not teach or suggest all the claim limitations.

Claims 1-10 are dependent claims that depend directly or indirectly on claim 1, which has been shown to be non-obvious over the cited art. Independent claims 11 and 21 recite a like distinction and are thus non-obvious over the cited art. Claims 12-20 depend directly or indirectly on claim 11 and claims 22-30 depend directly or indirectly on claim 21 and are thus non-obvious over the cited references.

Therefore, separately or in combination, Bergsten, DuLac, Kern, Wilson, Mogul and Miller do not teach or suggest the Applicant's claimed invention.

Accordingly, the present invention as now claimed is not believed to be made obvious from the cited references. Removal of the rejections under 35 U.S.C. § 103(a) and acceptance of claims 1-32 is respectfully requested.

CONCLUSION

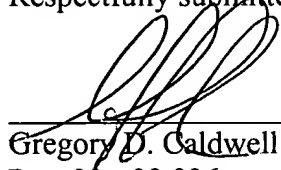
Applicant is herewith submitting an IDS. It is respectfully requested that the Examiner consider and make of record in the subject application the information cited in this IDS.

In view of the foregoing, it is submitted that all claims (claims 1-32) are in condition of allowance. The Examiner is respectfully requested to contact the undersigned by telephone if such contact would further the examination of the above-referenced application.

Please charge any shortages and credit any overcharges to Deposit Account Number 02-2666.

Respectfully submitted,

Dated: 2/13/06

  
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